

**WHAT IS CLAIMED IS:**

1. A decentralized power supply system for a vehicle, comprising at least one dedicated fuel cell system, which is electrically isolated from other power generators of the power supply system, for supplying electricity to at least one assigned electric consuming device, wherein the at least one dedicated fuel cell system is adapted to be collocated with the at least one assigned electric consuming device on or in a structural component of the vehicle, which can be preassembled as a subassembly.

2. Power supply system according to Claim 1, wherein said structural component comprises at least one vehicle door on which or in which at least one fuel cell system is arranged for supplying electricity to at least one electric consuming device of the vehicle door, the consuming device being at least one of a window lift mechanism, an outside mirror heater and an electric mirror adjusting system.

3. Power supply system according to Claim 2, wherein said structural component comprises at least one vehicle seat which can be movably fastened on the vehicle and on which or in which at least one fuel cell system is arranged for supplying electricity to electric consuming devices of the vehicle seat

selected from the group consisting of an electric seat heater and an electric seat position adjusting system.

4. Power supply system according to Claim 1, comprising at least one secondary unit provided with an electric drive, on which or in which secondary unit at least one fuel cell system is arranged for supplying electricity to the drive, the secondary unit being an air-conditioning compressor.

5. Power supply system according to Claim 1, comprising at least one vehicle body module on which or in which at least one fuel cell system is arranged for supplying electricity to electric consuming devices of the vehicle body module.

6. Power supply system according to Claim 1, wherein the fuel cell system comprises at least one fuel cell or a group of fuel cells and an assigned fuel supply system for the fuel cells.

7. Power supply system according to Claim 6, wherein the fuel supply system has at least one exchangeable fuel storage device.

8. Power supply system according to Claim 7, wherein said fuel storage device comprises a hydrogen cartridge.

9. Power supply system according to Claim 7, wherein the fuel supply system has at least one fuel tank for accommodating a hydrocarbon-containing liquid fuel.

10. Power supply system according to Claim 9, wherein the fuel supply system further comprises a reforming device for conversion of fuel to hydrogen.

11. A vehicle having a decentralized power supply system comprising at least one dedicated fuel cell system, which is electrically isolated from other power generators of the power supply system, for supplying electricity to at least one assigned electric consuming device, wherein both the at least one dedicated fuel cell system and the at least one assigned electric consuming device are collocated on or in a structural component of the vehicle, which can be preassembled as a subassembly.

12. A vehicle having a power supply system according to Claim 8, wherein the fuel tank is exchangeable or fillable outside the vehicle or the component.

13. A component for a vehicle having at least one electric consuming device and devices for fastening the component to at least one other component of the vehicle, wherein the component has at least one fuel cell system for supplying electricity to its electric consuming devices.

14. Component according to Claim 13, wherein the component can be preassembled as a subassembly separately from other components of the vehicle.

15. Component according to Claim 14, wherein the component is one of a vehicle door, a vehicle seat, and a secondary unit provided with an electric drive.

16. Component according to Claim 15, wherein said secondary unit is one of an air-conditioning compressor, and a component having a photoelectric device.